

SEDZIMIR,

5930\* Obtaining Cobalt As a By-Product During the Hydro-metallurgical Treatment of Lean Polymetallic Ores. Otrzymywanie kobaltu jako produktu uboczego przy hydrometallurgicznej przerobce ubogich rud wielometalicznych. (Polish.) J. Kamiński and J. Sędzimir. *Hutnik*, v. 21, no. 10, Oct. 1954, p. 321-324.

Method of Co recovery from copper pyrite ores, 12 ref.

PA

SEDZIMIR, JERZY

3

CH

Precipitation of cobalt from aqueous solutions of its salts by metallic zinc. Julian Kamecki and Jerzy Sedzimir. Arch. Gornictwa i Hutyctwa (Warsaw), 3, 67-80 (1965) (English summary).—The effect was studied of temp., kind of Zn (common Zn, a commercial electrolytic Zn, electrolytic Zn obtained in the lab.), magnitude of the pptd. surface, rate of mixing, and acidity on the kinetics and mechanism of pptn. of Co by Zn from  $\text{CoCl}_4$  soln. In the temp. range 50-65° the rate const. varied from 0.007 to 0.67. Increased acidity of the soln. decreased the rate of pptn. The rate of mixing and the kind of Zn had no effect. The rate increased almost linearly with the quantity of Zn powder added. Analysis of the rate equation  $dc/dt = f(c)$  where c is the concn. of  $\text{CoCl}_4$  in the soln., showed that pptn. did not proceed to completion, owing probably to a minute layer of product on the reaction surface. The concn. of the soln. at the end of the reaction depended on the ratio of the quantity of reacting soln. to the surface of pptg. metal. The potential of the reacting Zn varied from 0.75 to 0.55 v. throughout.

P. Dreyfuss

①

REB  
P.D.

*SZEDRZMINKOWSKY*

Anodic oxidation of ferrous sulfate. Julian Kamecki and Jerzy Szczumil. *Polska Akad. Nauk Arch. Nauk. 1, 118-136 (1950)* (English summary).—The work was done to elucidate certain problems pertaining actually to the hydro-metallurgy of Zn. The kinetics, mechanism, current efficiency, and consumption of energy were detd. for the anodic oxidation of  $\text{FeSO}_4$  (I). The anode space was sep'd.

from the cathode space by a diaphragm of porous clay. The catholyte was either 0.8*N*  $\text{H}_2\text{SO}_4$ , or 0.00*N* or 2.7*N*  $\text{ZnSO}_4$  (II), and the anolyte was always the same soln., but with various addns. of I. The changes of the I concn. were detd. by aid of a  $\text{KMnO}_4$  titration. During the course of the electrolyses the voltage, the amperage, and the electrode potentials were continuously measured, the c.d.s. were changed, Pb, Pt, or C anodes were used, and the expts. were conducted at 20°, 40, and 60°. The c.d. shows a slight effect on the rate of oxidation, the current yield decreases with increasing d., Cu ions neither influence the rate of oxidation nor the current yield. The greatest rate of oxidation was obtained on Pb-anodes. Under the assumption that the reaction is of the first order, the activation energy *E* is found to be about 2000 cal. The velocity consts. in 0.8*N*  $\text{H}_2\text{SO}_4$ , 0.00*N* II, and 2.7*N* II are indirectly proportional to the viscosities of these solns., like this:  $k_1/k_2/k_3 = 1:0.81:0.45; 1/\eta_1:1/\eta_2:1/\eta_3 = 1:0.87:0.49$ . The limiting currents measured in solns. of 0.8*N*  $\text{H}_2\text{SO}_4$  and 0.66*N* II are linear.

*Chm 2*

*RJN*

*MK*

Kamecki, Julian and Szulzimir, Jerzy

functions of the contents of I in these solns. The slopes of these lines are approx. indirectly proportional to the respective viscosities, i.e.  $\alpha_1/\alpha_2 \approx 1/n_1 : 1/n_2$ . This proves that the rate of anodic oxidation of I is governed by the diffusion of  $\text{Fe}^{++}$  to the anode and that the oxidation occurs at the surface of the anode. The anodic polarization curves show that the current begins to flow after overcoming an anode potential of about +000 mv., and O discharges after a potential of +1400 mv. is reached; this seems to indicate that the oxidation at the anode goes directly  $\text{Fe}^{++} \rightarrow \text{Fe}^{4+}$ , as the normal potential of this reaction is +770 mv., and at the beginning, when the  $\text{Fe}^{4+}$  concn. is still low, the value is somewhat lower. It was thus concluded that after the starting of the oxidation, if one would keep the anode potential always lower than needed for the liberation of O, a high current efficiency could be obtained. And indeed it was possible experimentally to reach a current efficiency of 100% both in 0.8N  $\text{H}_2\text{SO}_4$  and 0.66N II. Under those conditions 0.96 kw.-hrs./kg. Fe are used at the anode. If Pb is used as cathode, and the value will be less if Ni cathodes are used (less overvoltage). W. J.

2/2

~~SECRET~~

REF ID: A65425 B

The kinetics of lead precipitation by iron and zinc in chloride solutions. Julian Kamecki, Jerzy Szczepanik, and Michałini Cmytryk. *Polska Akad. Nauk Acta. Chimica* 1, 195-210 (1958) (English summary).—The kinetics and mechanism of the process of Pb pptn. from  $\text{PbCl}_2$  solns. by aid of Fe and Zn is investigated. The results are presented for the effects of temp., speed of mixing, concn. of the starting solns., and amt. of added free HCl in the course of the pptn. The rate of pptn. increases with increasing temp., and if Fe is used, there is a distinct relation between the rate of pptn. and the rate of stirring; furthermore, the initial concn. of the soln. affects the kinetics too. If 0.001 to 0.01 mole of HCl is added to a l. of soln., the pptn. rate decreases. In the expts. with Zn the purity of the Zn had no effect on the rate of pptn. *per se*, yet with this metal the rate increased as the reaction progressed. In plots of the potential of the pptg. metal as a function of time, the curves go through a max., and then drop asymptotically to the original value. This is probably because the  $\text{Pb}^{++}$  first discharges at a great rate, i.e. it accepts electrons from the surface of the Zn, and the electron acceptance from the Zn becomes slower and slower as the concn. of the  $\text{Pb}^{++}$  decreases in the reacting soln. The common belief that in the pptn. by various metals the ratio of the reaction rates is equal to the ratio of the equil. consts. is erroneous. *Werner Jacobson*

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JMK

SEDZIMIR

✓ "Kinetics and Mechanism of Cementation Processes. I.—Model  
Lead/Zinc Cementation Cell." J. Sedzimir and M. Pawelkowa  
(Bull. Acad. Polon. Sci., 1956, [iii], 4, (10), 717-721).—[In English].  
Measurements of pptn. of Pb by Zn were made in a Daniell-type  
cell with diaphragm. Current intensity and electrode potentials  
were measured and curves are shown.—J. C.

MT

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SEDZIMIR, J.

VV Kinetics and Mechanisms of Cementation Processes. II.—Effect of Cementation Products on Kinetics of the Process.—J. Sedzimir (*Bull. Acad. Polon. Sci.*, 1956, [iii], 4, (10), 723–728).—[In English]. Cf. *Ibid.*, p. 717; preceding abstract. The form of the curves in [I.—] is discussed. Three groups are distinguished according to the texture of the precipitate: loose deposit with poorly developed surface following Boguski's equation; a loose deposit with well-developed surface when the "const." of the equation increases or shows a notable discrepancy; and a solid layer covering the surface with a steep anodic-polarization curve with kinetics of zero order.—J. C.

SĘDZIŃSKI, JERZY

ESCH

POLAND/Chemical Technology. Chemical Products and Their Application.  
Electrochemical manufacturing. Electrodeposition.  
Chemical Sources of Electrical Current.

H-12

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 15160.

Author : Kamecki Julian, Sedzimir Jerzy, Zemura Zdzislaw

Inst : Academy of Mining and Metallurgy.

Title : Some Problems of Electrochemical Refining of Copper.

Orig Pub: Zesz. nauk. Akad. gorn.-hutn., 1957, No 10, 143-156.

Abstract: There are considered the theory of electrochemical refining of Cu, effects of individual factors (composition, temperature and rate of flow of electrolyte, D), defects and advantages of the methods used. Also reviewed are the attempts to modify the classical process (for example, electrolysis with ammonium electrolytes, electrolytes containing  $\text{Cu}^+$ , etc.). Bibliography 25 references.

Card : 1/1

Scd2/Mir, J.

Card 1/2

## POLISH TECHNICAL ABSTRACTS

Vol. 26, Nr. 2, 1957

Kanecki J., Siedlimir J., Gorytryk M. The Kinetics of Lead Precipitation by Iron and Zinc in Chloride Solutions.

"Kinetyka wytrącania ołówku żelazem i cynkiem z roztworów chlorowowych". Archiwum Naukowe (PAN), No. 3, Warszawa, 1956, FWN, pp. 103-216, 14 figs., 6 tabs.

The present paper deals with the kinetics and mechanism of the process of lead cementation from chloride solutions using iron and zinc as reagents. Investigations were made into the influence on the course of the cementation process of temperature, speed of mixing, concentration of the initial solution and acidification. The investigations showed that the rate of lead cementation from a chloride solution increased with increases in temperature. A distinct ratio was ascertained between the rate of the lead cementation process using iron and the speed at which the solution was mixed. The experimental results of the research here described indicate the dependence of the kinetics of the process of precipitation of lead by iron on the initial concentration of the reacting solution. The acidification of the solution in the range of 0.001-0.01 grammes equivalent of hydrochloric acid per litre decreased the rate of precipitation. It was ascertained that the degree of purity of zinc when used as a precipitating agent does not influence the kinetics of cementation. During the precipitation of lead by zinc, a distinct increase in the rate of the process was observed. The potential curves

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The Kinetics of Lead Precipitation by Iron and Zinc in Chloride Solutions.

(the potential of the precipitating metal as a function of time) at first show an increase, and then, after reaching a maximum, a decrease to a value approaching the initial potential. This fact is explained by a high rate of discharge of the lead ions (accepting electrons from the surface of the zinc) at the beginning of the precipitation period; and an increasingly slow electron acceptance from the zinc surface in proportion as the concentration of lead ions decreases in the reacting solution. The authors demonstrate the incorrectness of the statement that in cases of cementation by various metals the relation of the reaction rates is equal to the relation of the equilibrium constants of these processes.

SEDZIMIR, J.

Kinetics of the precipitation of metals by metals, precipitation of lead by zinc in the model system; an abridgment of a lecture. p. 557. Meeting of the Section of Chemical Sciences of the Polish Academy of Sciences. p. 561. We fight for foreign currencies.p.563  
3d All-Polish Contest of Rationalizers on the economizing of electric power. p. 565

WIADOMOSCI CHEMICZNE. (Polskie Towarzystwo Chemiczne)  
Wroclaw. Vol. 12, no. 9, Sept. 1958.  
Poland

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, no. 6, June 1959  
Uncl.

POLAND / Chemical Technology. Chemical Products and H  
Their Application. Corrosion. Corrosion Control.

Abs Jour: Ref Zhur-Khimiya, No 12, 1959, 42713.

Author : Sedzimir J., Zembura Z.

Inst : Not given.

Title : Corrosion of Chrome Steel.

Orig Pub: Hutnik (Polska), 1958, 25, No 7-8, 303-307.

Abstract: A case of corrosion (C) is described involving storage of the stainless steel parts of a steam generator made of ST. 2H13 (0.16-0.24% C, 12-16% Cr) wrapped with well oiled and graphited asbestos tape. Before the storage the involved parts were subjected to a hydraulic (or steam-water) test at a temperature of 360°. These tests were conducted in a chamber for 72 hours, at 80°, and at high humidity conditions. The test involved determin-

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POLAND / Chemical Technology, Chemical Products and H  
Their Application, Corrosion, Corrosion Control.

Abs Jour: Ref Zhur-Khimiya, No 12, 1959, 42713.

Abstract: ation of the potential difference of the galvanic cell created by steel and graphite while employing 3% HCl solution. Curves of the cathode polarization of steel in 3% HCl solution were then determined. For the determination of the effects of grease decomposition products on C, water was analyzed after the treatment of greased tape in an autoclave. It was established that products of grease decomposition do not contain corrosive compounds (such as chlorides and sulfates), hence, their presence does not affect the rate of C. The basic reason of the existence of C is the contact between the chrome steel and graphite. Moreover, the increased rate of steel C is proportional to

Card 2/3

POLAND / Chemical Technology. Chemical Products and H  
Their Application. Corrosion. Corrosion Control.

Abs Jour: Ref Zhur-Khimiya, No 12, 1959, 42713.

Abstract: this contact (increased contact surface of cathode-graphite causes greater C). -- F. Smolyanskaya.

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H-6

18(3)

POL/39-59-12-1/16

AUTHOR: Sędzimir, Jerzy, Doctor, Engineer, Zembura, Zdzisław,  
Doctor

TITLE: Comparative Research into Resistance to Corrosion of  
Steel 1 H 13, H 17, H 17 T, H 25 T, 1 H 18 N 9 T, in  
Water with Small Chloride Content

PERIODICAL: Hutnik, 1959, Nr 12, pp 473-475 (Poland)

ABSTRACT: The scope is to find adequate chromium steel, to re-  
place scarce nickel in chromium nickel steel. Research  
was conducted in conditions similar to those in the  
finishing stages of wet working of artificial fiber.  
Samples of dimensions: 40x15x2 mm of 1 H 13, H 17,  
H 17 T, and H 25 T steel, welded and non-welded, were  
used and compared with analogical samples of 1 H 18 N  
9 T steel. The samples were alternately, wholly or  
partly immersed ( 1 minute wholly immersed, 1.5 minute  
in the air, 1.5 minute partly immersed) in distilled  
water and in solutions of 0.116 g NaCl per liter and ✓

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Comparative Research into Resistance to Corrosion of Steel 1 H 13,  
H 17, H 17 T, H 25 T, 1 H 18 N 9T, in Water with Small Chloride  
Content

3 g NaCl per liter, with, in all three cases, pH being 7.5  $\pm$  0.3. In distilled water after 17 days, and in the 0.116 g NaCl solution after 12 days, no changes were observed, except for rusty spots on the weld of the welded samples H 17, H 17 T and H 25T in the 0.116 g NaCl solution. In the 3 g NaCl solution, there was after 2-3 days, visible corrosion and measurable losses of weight, shown on Fig 1 (non-welded) and Fig 2 (welded samples). Results show that all five non-welded steels are practically corrosion resistant. In the 0.3% solution one sample (1 H 13) was considerably corroded but samples 1 H 18 N 9 T and H 25 T resisted well. The picture is different with welded samples. Corrosion rapidly increases in the H 25 T sample. The welds of the samples H 17 T and 1H 18 N 9 T suffered intercrystalline corrosion. It is suggested constructing avivage tubs for artificial fiber production of

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POL/39-59-12-1/16

Comparative Research into Resistance to Corrosion of Steel 1 H 13,  
H 17, H 17 T, H 25 T, 1 H 18 N 9 T, in Water with Small Chloride  
Content

H 25 T steel, provided that the welding technology is  
improved. There are 5 figures and 4 references, 1 of  
which is Polish, 1 Soviet, 1 English and 1 German.

ASSOCIATION: Akademia górnictwo-hutnicza (Mining and Metallurgical  
Academy, Cracow)



Card 3/3

16.6310

30578  
P/038/61/006/003/003/003  
E071/E180

AUTHOR: Sedzimir, Jerzy

TITLE: The influence of the pH on the kinetics and mechanism  
of the anodic dissolution of iron

PERIODICAL: Archivum hutnictwa, v.6, no.3, 1961, 205-229

TEXT: The influence of the pH within a range of 2-5 on the polarisation of iron in sulphate solutions at 25 °C was investigated. The majority of experiments were carried out using electrodes made of a low carbon, cold rolled steel. In a few experiments, a high purity iron was used. The polarization and corrosion currents were separated by measuring the weight losses of the anodes and the integrated corrosion currents. It was shown that the corrosion current is a logarithmic function of the pH. Extrapolation of the anodic Tafel lines to the equilibrium potential, calculated from the thermodynamic data, enabled finding the values of exchange currents. Discussing the shape of the current density - pH curve (at a constant potential) and of the potential - pH curve (at a constant current) in the light of the Gerischer equation, it is concluded that the shift of anodic

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P/038/61/006/003/003/003

E071/E180

The influence of the pH on the ...

polarisation curves with the change of pH can be better explained by the hydrogen poisoning than by the hydroxyl theory. The Pourbaix diagram shows that, at a low pH range, reactions at the iron anode differ from those found in neutral or alkaline solutions. Therefore, results obtained in acid, neutral or alkaline media should be considered quite independently. The experimental part of the work was done under the direction of Professor T.P. Hoar, Department of Metallurgy, Cambridge University. B. Kabanov and A. Frumkin are mentioned in the article for their contributions in the field of kinetics. There are 11 figures, 2 tables and 24 references: 4 Soviet-block and 20 non-Soviet. The four most recent English language references read:

- Ref. 8: M. Stern, R. Roth. Journal of the Electrochemical Society, Vol. 104, 1957, 390-392.  
Ref. 14: M. Stern, L. Geary. J. Electrochem. Society, Vol. 104, 1957, 56.  
Ref. 21: U.R. Evans. Corrosion, Passivity and Protection, London, 1960.

Card 2/3

30578

The influence of the pH on the .... P/038/61/006/003/003  
E071/E180

Ref. 23: J. Bockris. Modern Aspects of Electrochemistry,  
No. 2, London, 1959.

SUBMITTED: February, 1961.

Card 3/3

SEDZIMIRSKA, B.

On new saccharin and 6-nitrosaccharin derivatives. Wied  
chem 16 no.7:465-466 Jl '62.

SEDZIMIRSKA, B.

New durable phenoxy radical. Wiad chem 17 no. 5:308-309  
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BOBRANSKI, Boguslaw; GIELDANOWSKI, Jerzy; PELCZARSKA, Alicja;  
SEDZIMIRSKA, Bozena; SOBCZYK, Anna; WILIMOWSKI, Marian

On some aliphatic and alicyclic amines with hypotensive activity .  
Arch. immun. ther. exp. 10 no.4:818-833 '62.

1. Department of Pharmaceutical Chemistry, School of Medicine,  
Wroclaw; Department of Pharmacology, Institute of Immunology  
and Experimental Therapy, Polish Academy of Sciences, Wroclaw.

(AMINES) (ANTIHYPERTENSIVE AGENTS)  
(PHARMACOLOGY)

TABEAU, Jerzy; MIKULOWSKI, Pawel; SEIDZIWy, Ludwik

Problem of ventricular tachycardia. Polski tygod. lek. 12 no.52:2026-2029  
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1. Z I Kliniki Chorob Wewnętrznych A. M. w Krakowie; kierownik: prof. dr  
L. Tochowicz i z Zakładu Anatomii Patologicznej A. M. w Krakowie;  
kierownik: prof. dr J. Kowalczykowa. Adres: Kraków, ul. Kopernika 17.  
I Klinika Chorob Wewnętrznych A. M.  
(VENTRICULAR FIBRILLATION, case reports (Pol))

KOPERA, Zygmunt; SEDZIWy, Ludwik

Application of penicillin in the treatment of peptic ulcer of the stomach. Polski tygod. lek. 13 no.1:8-12 6 Jan 58.

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(PEPTIC ULCER, ther.

penicillin, value in differentiation from cancer (Pol))

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peptic ulcer, value in differentiation from cancer (Pol))

(STOMACH NEOPLASMS, differ. diag.

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On some problems of cor pulmonale. Pol. tyg. lek. 19 no.13:463-467  
23 Mr '64.

1. Z. I Kliniki Chorob Wewnętrznych Akademii Medycznej w Krakowie  
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On periodic solutions of Hamiltonian system of differential  
equations on the plane. Prace matem Krakow no. 9:81-86 '63.

BEDNARZ, Stanislaw, mgr inz.; GIERGIEL, Jozef, mgr inz.; SEDZIWY, Stanislaw,  
mgr inz.

Conditions for stable work of ladles transporting liquid metal. Hutnik  
P 30 no.1:13-16 Ja '63.

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On the trajectories and orbits of trajectories of a two-dimensional  
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. Department of Engineering Mechanics, School of Mining and  
Metallurgy, Krakow. Presented by V. Siedzik.

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Analysis of breakdowns in the production and distribution of electric power in 1953  
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SC: East European Acquisitions List, Vol. 3, No. 9, Sept. 1954, Lib. of Congress

SELMAN, J.

"Analysis of Defects Caused Lately by Faulty Operation of Distribution Stations." p. 134,  
Praha, Vol. 3, no. 4, 1953 Apr.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

SEKANIN, J.; REHAK, V.

"To decrease disturbances in distributing systems."

ENERGETIKA, Praha, Czechoslovakia, Vol. 5, no. 3, March 1955

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Vol. 8, No. 2, August, 1959

Unclassified

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Requirements on hydroalternators from the point of view of electric power supply. El tech obzor 50 no.10:598-599 0 '61.

1. Ministerstvo paliv a energetiky.

(Dynamos)

SEEMAN, Jindrich, inz.; HRBEK, Vladimir, inz.; BERDICH, Kamil, inz.;  
KORAN, Vladimir, inz..

Notes on the reports of Seewald, Dockal and Kubik on hydroalternators.  
El tech obzor 50 no.10:600-602 O '61.

1. Ministerstvo paliv a energetiky (for Seeman) 2. Ceskomoravska-Kolben-Danek Praha, n.p. (for Hrbek) 3. Zavody V. I. Lenina Plzen, n.p. (for Berdich and Koran)

(Dynamics)

SEEMAN, Jiri,

SEEMAN, Jiri, MUDr; CURIK, Bohumil

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1. Z Ustavu epidemiologie a mikrobiologie v Praze. (Reditel: Doc.  
Dr Karel Raska)  
(PROTEUS,  
growth inhib.)

SEEMAN, Jiri

Findings of Listeria monocytogenes in rodents. Cesk. epidem.  
mikrob. imun. 6 no.3:140-145 May 57.

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Dr. K. Raska.  
(INFECTIONOUS MONONUCLEOSIS, diag.  
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SKEMAN, Jiri

Possible role of horses in the epidemiology of toxoplasmosis. (Results of examination of horses and other domestic animals by the complement fixation reaction for toxoplasmosis) J. Hyg. Epidem., Praha 3 no.2: 229-231 1959.

1. Institute of Epidemiology and Microbiology, Prague.  
(TOXOPLASMOSIS, transm)  
(HORSES, dis)

SERY, V.; SAUER, J.; PHAM VAN NONG.; JIROVEC, O.; JIRA, J.; SEEMAN, J.

Study of toxoplasmosis in Vietnam. J.hyg.epidem., Praha 3 no.4:  
444-449 1959.

1. Departments of Microbiology and Gynaecology and Maternity,  
Czechoslovak Hospital, Haiphong; Institute of Epidemiology and  
Microbiology, Prague, Protozoology Laboratory of the Czechoslovak  
Academy of Sciences, Prague.  
(TOXOPLASMOSIS epidemiol.)

SEEMAN, Jiri

Serological data based on complement fixation reaction in toxo-plasmosis in horses & other domestic animals. Cesk. epidem. mikrob. immun. 8 no.4:228-234 July 59.

1. Ustav epidemiologie a mikrobiologie v Praze.  
(ANIMALS, DOMESTIC, dis.)  
(COMPLEMENT)  
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SEEMAN, Jiri

Results of serological investigations in various groups of the  
population of Czechoslovakia for toxoplasmosis. Cesk.epidem.  
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(TOXOPLASMOSIS epidemiol)

SEEMAN, Jiri; ZASTERA, Milan; POKORNY, Jan; HUBNER, Jiri

Epidemiological examination of the glandular form of toxoplasmosis.  
Cas. lek. cesk. 101 no.49:1/4,1-1445 7 D '62.

1. Ustav epidemiologie a mikrobiologie v Praze, reditel prof. dr.  
K. Raska.  
(TOXOPLASMOSIS) (LYMPHADENITIS)

SEEMAN, J.

Importance of combined examination for toxoplasmosis in oto-rhinolaryngology. Cesk. otolaryng. 13 no.1:41-44 F'64.

1. Ustav epidemiologie a mikrobiologie v Praze; reeditel: prof.  
dr. K.Raska.

CZECHOSLOVAKIA

SEEMAN, J., Institute of Epidemiology and Microbiology (ustav epidemiologie a mikrobiologie), Prague, Prof. K. RASKA, MD, Dr of Sciences, director, and KLEINKA, L., Second Eye Clinic (II. oční klinika), Faculty of General Medicine (Fakulta všeobecného lekarství), Charles University, Prague, Academician J. KURZ, director.

"Examination of Patients With Inflammatory Affections in Eyes by Means of the Complement-Fixation Reaction to Toxoplasmosis"

Prague, Casopis Lekaru Českých, Vol CII, No 37, 13 September 63,  
pp 1024-1028.

Abstract [Authors' English summary, modified]: A total of 351 patients suffering from acute uveitis were examined. They were divided into age groups. A higher level of toxoplasmatic antibodies was found in 145 examinations (41.3 percent), significantly higher than in the control group (16.8 percent). A positive reaction was more frequent (46.4 percent) in patients with posterior uveitis than in the group with anterior uveitis (37.3 percent). No significant differences were found between age groups. The authors consider the complement-fixation and Sabin-Feldman reactions as the most reliable methods. Nineteen references, including 2 Czech.

1/1

SEEMAN, J.; KLENKA, L.

Examination of patients with inflammatory eye diseases with  
the complement fixation reaction for toxoplasmosis. Cas. lek.  
cesk. 102 no. 37:1024-1028 13 S '63.

1. Ustav epidemiologie a mikrobiologie v Praze, reditel prof.  
dr. K. Raska, DrSc. II ocní klinika fakulty všeobecného  
lékařství KU v Praze, prednosta akademik J. Kurz.  
(TOXOPLASMOSIS, OCULAR) (UVEITIS)  
(SCLERA) (KERATITIS)  
(COMPLEMENT FIXATION REACTION)

SKEMAN, M.

Organization of auditory care in Czechoslovakia. Cas. lek.  
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Speech rehabilitation following laryngectomy. Cas. lek. cesk. 90  
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EAC-BETA MEDICA Dec 11 Vol 11/41 C. R. L. Nov 30

2198. PATHOLOGY OF THE OESOPHAGEAL VOICE - Zur Pathologie der Ösophagusstimme - Seeman M. N.B. Engelse 36, Praha - FOLIA PHONIAT. (Basel) 1958, 10/1 (44-50)

The author was the first (1919) to introduce the term 'oesophageal speech'. In the years 1922 to 1924 he produced a number of works describing in detail the physiology of the oesophageal voice, finding that the pseudoglottis is formed at the mouth of the oesophagus, and that the air is expelled from it by antiperistaltic movements. In treating 342 laryngectomized patients, difficulties arose in 63 cases, the causes of which were described. Their consequences are pathological changes in the oesophageal voice, manifest in disturbances of its quality and its formation. Quality disturbances arise when the pseudoglottis fails to function adequately, when the hypopharyngeal cavity is modified by infiltrates and in the case of persistent pre-operative hoarseness. Phonation is disturbed, if it occurs during breathing or if swallowing movements are used to fill the oesophagus, or if the pseudoglottis is displaced from the mouth of the oesophagus to the hypopharynx. Finally a case of phonaesthesia of the oesophageal voice is described.

(XI, 19)

IVANKOVIC, Stanislav; SEEMAYER, Norbert

Lymphatic leukemia produced by transplantation of lymphosarcoma.  
Radovi Med. fak. Zagrebu 3:225-227 1955.

1. Iz Zavoda za medicinsku kemiju Medicinskog fakulteta u  
Zagrebu (pred. Prof. dr. T. Pintar).  
(LEUKEMIA, LYMPHATIC, experimental,  
induced by transpl. of lymphosarcoma.)  
(LYMPHOSARCOMA, transplantation,  
causing exper. lymphatic leukemia)

SEESMAA, V.

Cultivation of coppice in the Tahtvere forest area. p. 89

SOTSILKLIK POLLUMJANDUS. POLLUMJANDUS MINISTEERIUM.  
Tallin, Hungary. No. 1, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11  
November 1959.

Uncl.

O. Seereiner:

Scientific principles of the construction of the materials consumption in  
electrical power generation - Villamosenergiafejlesztesi anyagfethasznalasok  
szerkesztesenek tudomanyos elve

Budapest, 1954, Nevezip. Kiado, 56 p., Ft. 35.-

SEERGER, I.

SEERGER, I. Niezwykle zjawiska niebieskie (Unusual Celestial Phenomena).  
Warszawa, 1949, p. 31.

SEEWALD, Vladimir, inz.

Main experience with the operation of hydroalternators and requirements put on manufacturer. Ei tech obzor 50 no.10:528-534 0 '61.

1. Povazske elektrarne, n.p., Trencin.

(Dynamos)

SEEWALDT, R.; CATZ, I.

A release device in the coiler of cotton cards. p. 27.

INDUSTRIA TEXTILA. (Asociatia Stiintifica a Inginerilor si Technicienilor din Romania si Ministerului Industriei Usoare) Bucuresti, Romania. Vol. 10, no. 1, Jan. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959.  
UNCL

CATZ, I., ing.; SEEWALDT, R., ing.

Coupling of steel cables and protection of their ends against disconnection. Rev transport 9 no.9:401-403 S '62.

CATZ, I., ing.; SEEWALDT, R., ing.

Protecting devices for main transmissions in the cotton carding machine. Ind test Rum 12 no. 3:113-114 Mr. '61.

1. Institutul de cercetari stiintifice pentru protectia muncii, Consiliul Central al Sindicatelor.

PODJEVIN, P., ing.; SEEWALDT, R., ing.

Protection on the flanges of pipelines conveying liquids  
likely to cause burns. Rev chimie Min petr 12 no.7:418  
Jl '61.

1. Institutul de cercetari stiintifice pentru protectia muncii.

SEEWALDT, R., ing.; CATZ, I., ing.

Directions of safety technics regarding the construction of general  
use machines for processing wood. Inclmului 15 no.11:439-441  
N '64.

SEF, F.

Yugoslavia (430)

**Technology**

The planning of chemical and technological processes with special attention to investigations in pilot-plant scale. p. 67. NAFTA. Vol. 3, no. 3, Mar. 1952

East European Accessions List. Library of Congress. Vol. 2, no. 3, March 1953.

UNCLASSIFIED.

SEF, Franc

friends ✓ 71

e. A. V-48  
Jan 10, 1954  
Petroleum,  
Lubricants  
and asphalt

Solvent extraction of lubricating oils. I. Data for process design. Franc Selj (Inst. nafta, Zagreb). *Nafta* (Yugoslavia) 4, 109-78 (1953).—A review with 49 references. II. Industrial processes. *Ibid.* 212-221.—A review with 36 references. Nikola Pavlic

12/9/54

Journal of the Institute of  
Petroleum  
Vol. 40 No. 361  
Jan. 1954  
Products

① Fuels

88. Selective refining of lubricating oils. F. Ref. Nafta  
(Yugoslavia), 1953, 4 (7), 212-21.—Industrial processes of  
solvent refining of lub oils, including solvent characteristics,  
are reviewed on the basis of extensive bibliography. Special  
consideration is paid to the furfural process.

(Author's Abstract.)

✓ 2122. Solvent extraction of lubricating oils. P. Sel. Nafta (Yugoslavia), June 1953, 8, 109-79.—The article presents a literature survey on data needed for the design of solvent extraction processes such as solvent refining of lub. oils. The following items are included: (1) phase equilibria; (2) methods of calculation; and (3) performance characteristics of solvent extraction equipment. Data on flow capacities and efficiencies of laboratory and commercial equipment for solvent refining of lub. oils are listed. (Author's Summary.)

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JM  
LKH

SeF F.

✓ Production of acetone by dehydrogenation of isopropyl alcohol.  
I. Activity of catalysts. II. Process conditions. N. Plavšić and  
E. Šut (Nafra, Zagreb, 1954, 5, 1-8, 9-14). Activities of 11  
catalysts are studied by passing PrOH vapours at low velocities  
over the different prep. at 350° and determining the % conversion  
to acetone by analysis of the products. Pure and mixed ZnO  
and CuO catalysts obtained by different methods, unsupported  
and supported on active C, silica gel, or pumice, and a  $\text{MoO}_3\text{-Al}_2\text{O}_3$   
catalyst are used. The highest (92.5%) conversion is reported  
with a catalyst containing 86.9% ZnO and 13.09% CuO obtained by  
decomposition of the corresponding carbonates at 450°.

II. A laboratory-scale study of process variables is made in  
the use of catalysts containing ZnO+2.5% Cu, and 5.5% ZnO  
on pumice. Optimum temp. and vapour flow rates are determined  
for each catalyst. Conversion increases considerably by recycling  
up to 1 mol.  $\text{H}_2$  per mol. of PrOH vapour. Some data regarding  
the size and dimensions of the catalytic converter to be used in  
commercial units are obtained in the tests. There is no substantial  
loss of activity of the catalyst after 60 hr. of use.

S. K. LACHOWICZ

0-14-54 MEF

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*SFF A*

101. Furfural solvent extraction. F. Šer and M. Marmic, *Nafra (Yugoslavia)*, 1951, 8 (8), 125-130. Dewaxed oil fractions of Iraqi crude were investigated for their suitability for the manufacture of lub oils by furfural solvent extraction. Investigations were carried out in a laboratory extraction column of 1100 mm height, filled with 4 mm Raschig rings, the efficiency of which was previously tested in the course of batch multistage countercurrent extraction runs. With the aid of this column, data were obtained as to the influence of process variables on the yields and properties of the refined product. The following process variables were examined: extraction temp from 73° to 112° C; the furfural-oil ratio from 114 to 632; and the temp gradient from 0° to 37° C. By comparing results of the batch multistage countercurrent extraction with those obtained on the column under the same conditions (temp and furfural-oil ratio), it was found that the extraction of the whole column approx corresponded to a 5-stage extraction, while the extraction with a shortened column (850 mm filling) corresponded with a 3-stage batch countercurrent extraction. Runs which were carried out for investigating the influence of the temp and furfural-oil ratio showed that, under the conditions applied, the quality of the raffinate (controlled by V.I.) changes linearly vs yields, without respect to whether these changes were attained by varying the temp of extraction or the furfural-oil ratio. Runs for determining the temp gradient maintained over the length of the tower, at approx optimum conditions, gave satisfactory results. From dewaxed dist of Iraqi crude of 54.5 and 41.2 V.I., raffinates were obtained in 80% yield with 96.2 and 90.7 V.I. (Authors' abstract.)

*RA [initials]*

SEF F.

*GP* ✓ Determination of the nitrogen content of kerogen rocks  
M. Kaučič-Somogy and F. Šef (Inst. naftu, Zagreb, Yugoslavia). *Neftegaz* (Yugoslavia), 4, No. 5 (1956) (English summary).—Mapstone's semimicro modification of the Kjeldahl method (cf. *C.A.* 44, 7518c) was compared with a Dumas semimicro method (cf. Parnas, *C.A.* 33, 80\*). The latter method is proposed in view of a higher percentage of satisfactory results and greater simplicity. N. P.

✓ ✓ ✓

①

1402. Laboratory coking of heavy residues from domestic oils.  
F. Sef. Nafta (Yugoslavia), 1969, 7 (5), 129-37.—The Yugoslav aluminium industry requires relatively large quantities of electrode coke. This study has been undertaken in order to examine the possibility of producing petroleum coke for this purpose from vacuum residues of domestic oils. Making a pilot plant, the coking tests have been carried out on a lab scale. Larger lab equipment has been constructed capable of giving a sufficient quantity of products for the determination of their qualities and for tests concerning their further treatment. The cat cracking of liq dist and eventual necessity of reducing the content of sulphur in petroleum coke have been taken into consideration. The equipment and the process of the continuous charging into the preliminary-heated oven are based on the well-known industrial procedure with Knowles ovens. Yields of coke, liq products, and gas have been examined, and on the whole their qualities have been fixed. The yields of coke are somewhat larger, owing to the diversity of vacuum residues, proportional to the Conradson carbon. Yields of the coke from 19.4, 27.0, and 37.2% vacuum residues of the domestic oils from Mramor Brdo, Kloster, and Bupjeni amount to 22.0-22.5, 20.1-18.8, and 20.6-19.8% wt at a calcination temp of 500°-700° C on the bottom of the oven. Yields of liq products amount to 68.6-68.1, 68.7-67.1, and

(over)

*See F.*

63.5-62.8% wt, and those of gas amount to 11.4-13.1, 10.7-13.1, and 13.5-14.7% wt for the above-mentioned residues and calcination temp. The content of coke volatile combustible matter decreases and varies in all residues approx from 7 to 2% with the rise of the calcination temp at a set interval. The content of ash in coke varies from 1.5 to 2% as raw oils have not been desalting before the preparation of vacuum residues. The content of sulphur in coke obtained from all examined residues does not vary essentially with the change of the calcination temp. It amounts to 1.9-2.1%. The quality of its products is not influenced by the calcination temp. According to the ASTM dist on the average ca 21% of the liq product distills at 200° C and ca 61% between 200° and 371.1° C. The average mol. wt. of gas in all residues decreases with the increase of the calcination temp from 23 to 19. With the described equipment and procedure it is possible to prepare from the vacuum residues of domestic oil a petroleum coke nearly corresponding to the specifications for the electrode coke used in the aluminium industry. The content of ash will be lowered by the usual refinery procedure, of desalting raw oils before dist. With the commercial coking procedure, which was followed in this work, it is possible to lower the content of coke volatile combustible matter below 2%, but a slightly different distribution of sulphur in products is to be expected. Besides, a probable preparation of a mixture of domestic oils with one richer in sulphur will give vacuum residues which will produce coke containing a proportionately larger amount of sulphur. For these reasons, when producing electrode coke for the aluminium industry, it is indispensable to take into account the necessity of removing certain quantities of sulphur. (Author's abstract).

*Fuel*

✓ 1633. A contribution to the knowledge of Yugoslav oil shales  
F. Sef. Nauka (Yugoslavia), 1956, 7 (8), 233-8.—The results  
of exploration of the oil shale reserves at Sinj and Aleksinac  
are given. The chemical composition of typical samples  
are also given. The oil shales of Sinj, both the main layer  
and the roof of the intercalation bituminous layer, are de-  
posited in marl and marly limestone along the Ruda rivulet  
in the direction ENE.-WSW. The Mala Ruda rivulet divides

the area into 2 parts: terrain A of 1500 m length and 600 m  
average width, and terrain B of 2580 m length and 350 m  
average width. Only the reserves of the south half of terrain  
A are exactly explored and estimated at ca 3.5 million tons.  
Of 65% of these reserves could be commercially exploited.  
The strata of these reserves reach a depth of 470 m, the main  
stratum of 2.4 m average thickness in a dip-angle of 40°  
and the roof with the intercalation bituminous layer of 4.9 m  
average thickness in a dip-angle of 49° 50'. The oil yield of  
the main stratum is 18.5%, that of the intercalation bituminous  
layer in the roof 15.6%, and the average oil yield of the entire  
structure of the S. part of the terrain is 16.5%. Considering  
the extension of both terrains A and B, the total reserve of  
oil shales of Sinj is estimated to be almost 4 times greater  
than the explored structure. Nevertheless, further explo-  
ration has been stopped. It has been proved that in spite of  
the convenient chemical composition, the mining of these oil  
shales under existing conditions would not be profitable.  
The oil shales of Aleksinac are deposited in clay-shales which  
form the roof of the coal layer now exploited. They are

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F. SEF

further deposited in the upper part of sand and clay strata which build the floor of this coal layer. The thickness of the deposits and the grades of oil yield vary according to their direction and dip. Those best explored, those in the roof of the coal layer, are deposited in 2 strata. The thickness of the first stratum varies from 12 to 16 m, that of the second from 20 to 26 m. The average oil yield is 0-14% in the first and 13.3-14.8% in the second stratum. The oil shale deposits beneath the coal layers are considerably less explored. Their thickness on the intercrossing is 30 m, the average oil yield 11.2%. The reserves of oil shales in the area of the existing coal mine shafts are estimated at 750 million tons. Only ca \$11 million tons could be exploited, due to the necessity of protecting inhabited or built-up areas. The average oil yield of these deposits is 12%. The analysis of samples from both places has found 13.3-14.3% organic matter, 6.7-27.0% oil (tested according to Fischer), and 0.56-0.78% total nitrogen. There is a considerable difference between the 3 kinds of oil shales regarding the content of total sulphur. The oil shales of Sinj with 31.6% organic matter have 1.63%, and those of Aleksinac with 30.6% organic matter have 3.28% sulphur. The chemical composition of ashes indicates that the inorganic part of the Sinj oil shale to a great extent consists of calcite and smaller quantities of clay minerals, whereas the inorganic part of the Aleksinac oil shales chiefly consists of clay minerals, calcite, or dolomite. (Author's abstract.)

2/2

JHM JH

✓ 627. Petroleum coke and its production. *Z. Sef. Nafta* (Yugoslavia), 1956, 7 (10), 301-7.—Describes industrial processes for the production of petroleum coke, i.e. delayed coking, Curran coking, continuous contact coking, fluid coking, and Hoechst continuous coking. The processes are reviewed on the basis of bibliography. The basic principles of the coking process and the structure of the petroleum coke are given.  
*(Author's abstract.)*

*Fuel*

SEF, F.

"Desulfurization of petroleum coke by means of gases."

p. 283 (Nafta) Vol. 8, no. 9, Sept. 1957  
Zagreb, Yugoslavia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958

3  
Desulfurization of coke obtained from native crude oils.  
Franc Šef (Inst. naftu, Zagreb). Nafta (Yugoslavia) 9,  
1968. Petroleum coke obtained from Klostar crude oil which contained 1.98% S and 6.3% volatile matter was ground to a particle size < 0.211 mm. and desulfurized for 160 min. at 450-850° and atm. pressure in the presence of various gases and gaseous mixts. At a space velocity of 2 l./g./hr. in C<sub>2</sub>H<sub>6</sub>, baking gas, catalytic cracker gas, a gas obtained by cracking of petroleum coke (contg. 58.4% H), NH<sub>3</sub>, and in pure H atms., resp., 11.3, 13.7, 7.2, 28.7, 62.3, and 52.7% S was removed. Addn. of steam to H was advantageous at high temps., but caused considerable loss. Coke samples from Mramor Brdo and Bunjani crude oils, contg. about 2% S, gave similar results in H and NH<sub>3</sub> atms.

N. Plavnik

JW

✓

FRANC SEF

✓ Investigation of native natural catalysts for the catalytic cracking of heavy gas oil distillates from native crude oils.  
Franc Sef and Radovan Lipovčak (Inst. naftu, Zagreb).  
*Nefte* (Yugoslavia) 9, 351-5 (1958).—Results of lab. catalytic cracking expts. on vacuum distillates from Lendava, Klokta, Mramor Brdo, and Bunjani crude oils with natural catalysts prepd. by acid treatment of Ljeljan and Glinovac clays are reported.  
N. Plavšić

8/23/

GID

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SEF, F.

Desulfurization of coke obtained from indigenous naphtha,  
with a special emphasis on desulfurization by means of  
gases. Bul sp. Yout 8 no.3/4:87 Je-Ag'63.

1. Institut za naftu, Zagreb.

SEFALOV, G.M., fel'dsher

Our experience in recording preventive inoculations with a card system. Fel'd. i akush. 24 no.11:48-49 N '59. (MIRA 13:2)

1. Il'yechevskiy fel'dshersko-akusherskiy punkt Ryazanskoy oblasti.  
(VACCINATION)

SEFALOVA, Ye.Ye.; SARKISYAN, R.R.; REBINDER, P.A.

Effect of hydrophilic plasticizer additions on the kinetics of  
cement hardening [with summary in English]. Koll.zhur. 20 no.5:  
(MIRA 11:11)  
611-619 S-0 '58.

1. Moskovskiy universitet, Khimicheskiy fakul'tet, Kafedra kolloidnoy  
khimii.  
(Cement--Testing)

SPANY, V.; SEFARA, J.; SOLTESZ, T.; TIMIAK, G.

Automatic control of water level by a transistor relay.  
Sbor VST Kosice 1:185-189 '64.

1. Scientific Circle of Students affiliated with the Chair of  
Electrical Engineering of the Higher School of Technology,  
Kosice. Submitted June 3, 1963.

CERNY, V., inz.; PUNCOCHAR, Z., inz.; KECLIK, V., inz.; SEFC, J., inz.  
JENICEK, L.; HRBEK, A.

Informations on metallurgy. Hut listy 16 no.2:147-151 F '61.

1. Ceskoslovenska akademie ved (for Cerny).

GARGULAK, Z.; SEFC, J.

Modeling the casting bay operation on an automatic computer.  
Hut listy 19 no. 4: 239-244 Ap '64.

1. Research Institute of Iron Metallurgy, Prague.

SEFTEK, Karlo, inz.

Electric furnaces for metallurgy in 1961. Elektrotehnika Hrv 5 no.3:105-  
106 '62.

L 21495-66 EWP(v)/EWP(k)/EWP(h)/EWP(l)

SOURCE CODE: CZ/0080/65/000/003/0062/0066

ACC NR: AP6010965

AUTHOR: Wergner, Frantisek (Engineer); Sefcik, Jiri (Engineer); Rybicka, Jiri  
(Engineer)ORG: Institute of Automation of the Chemical Industry, Prague (Ustav pro automatizaci  
chemickeho prumyslu)TITLE: Automatic control of the distribution of gases into several reactors connected  
in parallel

SOURCE: Automatizace, no. 3, 1965, 62-66

TOPIC TAGS: analog computer, automatic control, chemical engineering

ABSTRACT: This article describes the chemical process and presents a derivation of  
equations for the process for solution with a combination of two analog computers.  
Orig. art. has: 7 figures, 21 formulas, and 2 tables. [JPRS]

SUB CODE: 09, 07 / SUBM DATE: none / ORIG REF: 008 / OTH REF: 002

UPD: 1466.07-55

Card 1/1d

I. 34562-66

ACC NR: AP6025512

SOURCE CODE: CZ/0014/65/000/012/0466/0468

45  
B

AUTHOR: Sefcik, Pavel (Engineer)

ORG: none

TITLE: Measurement of the volt-ampere characteristic of a tunnel diode by the compensation method

SOURCE: Sdelovaci technika, no. 12, 1965, 466-468

TOPIC TAGS: tunnel diode, electric measurement, volt ampere characteristic

ABSTRACT: The article presents the circuits and a description of an instrument for measurement of the volt-ampere characteristic of a tunnel diode by the compensation method. The calculations of the device are given. It is characterized by relatively great accuracy and by simplicity of execution. Orig. art. has: 10 figures and 4 formulas. [JPRS: 34,691]

SUB CODE: 14, 09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 008

Card 1/1

09/16 0890

PUR, S.; SEFCIKOVA, F.

Electroconvulsive treatment and intraocular pressure. Cesk.  
oftal. 21 no.5:379-384 S '65.

1. Ocní oddelení Obvodního ustavu národního zdraví v Kromerizi.

SEFCIKOVA, F.

PUR. S.: SEFCIKOVA, F.

Operative treatment of myopia; experimental study. Cesk.  
oftn. 13 no.1:69-74 Feb 57.

(MYOPIA, surg.  
exper. (Cz))

CZECHOSLOVAKIA

SEFCOVIC, J., MD.

District Hospital (Okresna nemocnice), Zilina

Prague, Prakticky lekar, No 1, 1963, pp 17-20

"Unconsciousness and Asphyxiation."

*SEARCHED*, *K*  
**CZECH**

Anticonvulsive effect of derivatives of phenylacetylcarbamides. L. Buran, F. Selecký, and P. Šefčovský (Slovenská akad. vied, techn. org. látok, Bratislava, Czech.). Chem. Zvesti 8, 404-9 (1934).—The effect was investigated of phenylacetylcarbamide (I), diphenylacetylcarbamide (II),  $\alpha$ -bromophenylacetylcarbamide (III), and phenylacetylthiocarbamide (IV) in rats in preventing shock caused by pentamethylenetetraole. I, 800 mg./kg. or higher, was 100% effective; III, 1/100 mg./kg., decreased mortality of the rats by 90%, but did not prevent convulsions. Up to 1600 mg./kg. II and IV were not effective. Jan Něcka.

SEFCOVIC, P.

8

✓ Some esters of *N*-methyl-3-hydroxymimidines. L. Dl.  
bravkova, I. Ich., P. Sevcovic, and Z. Votlicko. (Slovenske  
Akad. Vied, Bratislava, Czech.). Chem. svetil 10, 421-6

(1950) (German summary).-- The following  $\text{CH}_3\text{NMe}_2\text{CH}_2\text{--}$

$\text{CH}_2\text{CH}_2\text{CHO}_2\text{R}$  were prep'd. (R, b.p./mm., and m.p./ph.  
rate given): Me, 77-9°/15, 119-20°; Et, 92-3°/15, 140-  
2°; Pr, 105-10°/14, 135-7°; sec-Bu, 110-11°/15, 162-4°;  
 $\text{MeCH}_2\text{CH}_2$ , 110-12°/9, 160-9°;  $\text{CH}_2\text{CHCH}_2\text{CH}_2\text{Me}$ , 120-  
1°/2, --; Ph, 117-18°/0.6, 219-20° (decompn.);  $\rho\text{-MeO-}\text{C}_6\text{H}_4$ , 165°/1, 221-3° (decompn.); 3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>, 108°/  
0.3, 213-14° (decompn.); 3,4,5-(MeO)<sub>3</sub>C<sub>6</sub>H<sub>2</sub>, 171-3°/0.5, 1  
217-18° (decompn.); 3-pyridyl, 110-11°/0.6, 193° (de-  
compn.); 3,4,5-(MeO)<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, --, 202-4° (de-  
compn.). Ina-Mich.

R.M.H.

SEFCOVIC, P.

✓The synthesis of some derivatives of alkaloids. IX.  
L. Dábravková, I. Ječo, P. Šefčovič, and Z. Votický  
(Slovenská Akad. Vied, Bratislava, Czech.). *Chem. listy*  
10, 561-4 (1966) (German summary); cf. *C.A.* 60, 155514.  
The synthesis of *d*-1-(4-pyridyl)- (I) and *d*-1-(4-pyridyl)-  
1,2,3,4-tetrahydro-6,7-dimethoxyisoquinoline (II) from the  
corresponding amide according to the Bischler-Napieralski  
reaction and subsequent hydrogenation is described.  
I. M.

*SEFCOVIC, P.*

The synthesis of some quaternary gramine salts.

Dábravková, I., Ján, P. Šefčovič, and Z. Valáček (Slovenská Akad. Vied, Bratislava, Czech.). *Chem. Zvesti* 11(1), 57-9 (1967) (German summary). — The methods from literature were modified and gramine methiodide, m. 165-6°, and gramine methosulfate, m. 152-3°, were prep'd. In high purity and in quant. yield.

Jan Mikša

*DM  
M*

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Esters of  $\alpha$ -dimethylaminocyclohexanoic acid. L. Dubravková, I. Šebková, P. Šebková, and Z. Voticová (Chem. Ústav Slovenské Akad. Vied, Bratislava, Czech.). Chem. Listy 11, 180-2 (1957) (German summary). — The following esters of  $\alpha$ -dimethylaminocyclohexanoic acid were prepared (acid, b.p./mm., and % yield of ester, and m.p. of hemi-H<sub>2</sub>PtCl<sub>6</sub> salt of ester given): AcOH, 96-7°/14, 00, 113-15°; EtCO<sub>2</sub>H, 112-14°/15, 74, 136-8°; iso-PrCO<sub>2</sub>H, 127-9°/12, 75, 127-9°; *m*-MeOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, 50, 110-12°; 3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, —, 58, 123-5°; 3,4,5-(MeO)<sub>3</sub>C<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, —, 58, 132-4°. Their hypotensive properties were studied. Jan Micko.

*JM*  
*Micko*

CZECHOSLOVAKI~~I~~/Organic Chemistry - Naturally Occurring  
Substances and Their Synthetic Analogs.

G.

ABs Jour : Ref Zhur - Khimiya, No 9, 1958, 28934  
Author : Dubravkova, L., Jezo, I., Sefcovic, P., Voticky, Z.  
Inst : -  
Title : Some Esters of 1-N-Methylephedrine.  
Orig Pub : Chem Zvesti, 11, No 5, 281-284 (1957) (in Slovak with  
summaries in German and Russian)

Abstract : A number of esters of 1-N-methylephedrine (I) with aliphatic aromatic acids are described. The esters were prepared from I by a previously described method (RZhKhim, 1957, 71547). I is synthesized by the following series of reactions: 3.3 gms of L-ephedrine, 586 gms of formalin (40 gms CH<sub>2</sub>O per 100 ml), and 390 gms of 85% HCOOH are refluxed for 5 hrs, and the product of the reaction is decomposed with 195 gms NaOH in 470 ml water; the yield of I is 286 gms, mp 85-86°,

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CZECHOSLOVAKI/ Organic Chemistry - Naturally Occurring  
Substances and Their Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28934

bp 134-135°/12 mm,  $[\alpha]_D^{20} (-30^\circ)$  ( $\text{CH}_3\text{OH}$ ).  
It is esterified with acids having the general formula  
 $\text{RCOOH}$ . The R, yield in %, bp in °C,  $[\alpha]_D^{20}$  (c 5;  
 $\text{CH}_3\text{OH}$ ), and mp in °C of the hydrochlorides (decomp)  
of the aliphatic esters are given below:  
 $\text{CH}_3$ , 88, 133-134/12 mm, -46.2°, 199-200;  $\text{C}_2\text{H}_5$ , 81,  
140-141/13 mm, -47.3°, 162-163; iso- $\text{C}_3\text{H}_7$ , 136-137/16  
mm, -45°, 154-155; n- $\text{C}_3\text{H}_7$ , 74, 142-143/12 mm, -40.5°,  
162-163; n- $\text{C}_4\text{H}_9$ , 77, 113-115/0.1 mm, -36.5°, 141-142;  
n- $\text{C}_5\text{H}_{11}$ , 75, 126-128/0.1 mm, 034.8°, 124-125;  
 $(\text{CH}_3)_2\text{CHCH}_2\text{CH}_3$ , 83, 148-149/0.35 mm, +15.3°, 190-191.

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SEFCOVIC, P.

G-2

CZECHOSLOVAKIA/Organic Chemistry - Synthetic Organic Chemistry.

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 14415.

Author : Dubravkova L., Jezo I., Sefcovic P., Voticky Z.

Inst : Inst. of Chemical Technology, Prague, Czechoslovakia.

Title : Some Esters of Basic Isopropanols.

Orig Pub: Chem. zvesti, 1957, 11, No 6, 351-357.

Abstract: Syntheses of  $RCH_2CH(CH_3)OCOAr$  (I), wherein R is the residue of an amine, by boiling for 3 hours 0.1 mole  $R'COCl$  in 100 ml  $C_6H_6$  and 0.2 mole  $RCH_2CH(CH_3)OH$  in 150 ml  $C_6H_6$  (the latter were prepared, with yields of 75-96%, from  $CH_3CHCH_2O$  and RH in autoclave, 5 hours, 170-190°). Listing the Ar, yield of I in %, BP in °C, MP of picrate and methyl iodide in °C: with  $\bar{R} = (CH_3)_2N$ :  $C_6H_5$ , 87-89/1 mm, 181-182, 184-186;  $\sigma\text{-}CH_3OC_6H_4$  ( $Ar'$ ), 125-126/1 mm, 165-166, 196-197;  $p\text{-}CH_3OC_6H_4$  ( $Ar^2$ ), 115-117/0.5 mm, 200-201, 169-170;  $3,4\text{-}(CH_3O}_2C_6H_3$  ( $Ar^3$ ), 159-160/1.5 mm, 203-204, 200-202;  $3,4,5\text{-}(CH_3O}_3C_6H_2$  ( $Ar^4$ ), 148-149/0.5 mm, 194-195,

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CZECHOSLOVAKIA/Organic Chemistry - Naturally Occuring Substances  
and Their Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28943

Author : Dubravkova, L., Jeza, I., Sefcovic, P., Voticky, Z.

Inst : -

Title : Synthesis of Some Alkaloid Derivatives, X.

Orig. Pub : Chem Zvesti, 11, No 7, 394-397 (1957) (in Slovak with  
Summaries in German and Russian)

Abstract : The synthesis of allolupinane (I) from 6-methyl-3-( $\beta$ -hydroxyethyl)-pyridine (II) by the following reaction scheme is described: II  $\rightarrow$  6-methyl-2-vinylpyridine (III)  $\rightarrow$  6-methyl-2-( $\gamma$ ,  $\gamma$ -dicarbetoxypropyl)-pyridine (IV)  $\rightarrow$  6-methyl-2-( $\gamma$ -carbetoxypropyl)-pyridine (V)  $\rightarrow$  4-methyl-5-ketoquinolizidine (VI)  $\rightarrow$  I (two recrystallizations). Preparation: 100 gms II poured into 300 gms KOH (180-190°, vacuum) gives III, yield 66.8%, bp 66-68°/10 mm; the picrate of III has an mp of

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CZECHOSLOVAKIA / Organic Chemistry. Synthesis.

G-2

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23412

Author : Dubrakova, L.; Jezo, I.; Sefcovic, F.; Voticky, Z.

Inst : Not given

Title : Abnormal Course of Reaction of Bischler-Napieralsky.

Orig Pub: Chem zvesti, 1957, 11, No 9, 536-541.

Abstract: In the study of the method of synthesis of the isoquinoline analogue of podophyllotoxin, 1-(3,4,5-trimethoxyphenyl)-3-carbethoxy-6,7-methylenedioxy-3,-4-dihydroisoquinoline (I) was obtained, and it was found on that occasion that no cyclohydration of the ethyl ester of  $\alpha$ -(3,4,5-trimethoxy-benzamido)- $\beta$ -(3,4-methylenedioxyphenyl)-propionic acid (II) is caused by the action of  $P_2O_5$ ; 4-piperonylidene-2-(3,4,5-trimethoxyphenyl)-oxazolone (III) is obtained with  $PCl_5$ , and I is only partially produced

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G - 15

CZECHOSLOVAKIA / Organic Chemistry. Synthesis.

G-2

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23<sup>4</sup>12

Abstract: ml of conc.  $H_2SO_4$  are mixed, 12 hours later the mixture is heated (about 100°, 3 hours), and II is separated using water, yield 82%, melt. p. 140-141° (from alc.). 33 g of II is boiled in 300 ml of toluene with 65 ml of  $POCl_3$  for 5 hours; the excess  $POCl_3$  and toluene are distilled off in vacuo; the remainder is treated with 250 ml of water, filtered, the solution is alkalized with 10%  $Na_2CO_3$ , and I is extracted with ether from the precipitate, yield 3.8%, melt. p. 113-114° (from alc.); picrate, melt. p. 193-194° (from alc.); the precipitate, filtered off from water, is washed with  $NaHCO_3$  and IV is obtained, yield 54%, melt. p. 98-99° (from dil. alc.). 15 g of  $PCl_5$  is poured into

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G-16

CZECHOSLOVAKIA / Organic Chemistry. Natural Substances G  
and Their Synthetic Analogues.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61103.

Author : L. Dubrakova, I. Jezo, P. Sefcovic, Z. Voticky.

Inst : -  
Title : Synthesis of Some Derivatives of Alkaloids. XI.

Orig Pub: Chem. zvesti, 1957, 11, No 11, 656-659.

Abstract: The synthesis of 5-methylallolupinane (I) of 6-methyl-2-vinylpyridiene (II) is described. 1-[6'-methylpyridyl-(2')]-3-carbethoxypentanone-4 (III) is prepared by the condensation of 1 mole of II with 0.2 mole of  $\text{CH}_3\text{COCH}_2\text{COOC}_2\text{H}_5$  (passing HCl through 4 to 6 hours, 5 hours of boiling), yield.

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CZECHOSLOVAKIA / Organic Chemistry. Natural Compounds G-3  
and Their Synthetic Analogs.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77830.

Author : Dubravkova, L., Jezo, I., Sefcovic, P. and Voticky, Z.

Inst : Not given.

Title : Syntheses of Some Alkaloid Derivatives. XIII.

Orig Pub: Chem Zvesti, 12, No 3, 140-142 (1958) (in Slovak  
with summaries in German and in Russian).

Abstract: The catalytic hydrogenation of papaverine in  
 $\text{CH}_3\text{OH}$  over Raney Ni ( $150^\circ$ , 150 atm) gave  $\frac{1}{2} \text{ [sic]}$   
-laudanosine, yield 62%, mp  $115-115.5^\circ$ , picrate  
mp  $177-178.5^\circ$ . For Communication XII see  
RZhKhim, 1958, 61104. -- From a summary by the  
authors.

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CZECHOSLOVAKIA / Organic Chemistry. Natural Compounds G-3  
and Their Synthetic Analogs.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77820.

Author : Dubravkova, L., Jezo, I., Sefcovic, P., and  
          Voticky, Z.

Inst : Not given.

Title : Esters of N,N-Disubstituted Aminoethanol.

Orig Pub: Chem Zvesti, 12, No 4, 252-255 (1958) (in Slovak  
with summaries in German and Russian).

Abstract: In the course of the investigation of compounds  
containing the N-C-C-OH group, some of which have  
a hypotensive action, the authors have synthesized  
compounds having the general formula  $\text{RCOOCH}_2\text{CH}_2$   
 $\text{N}(\text{CH}_3)(\text{CH}_2)_5\text{N}(\text{CH}_3)_2$ , where R = 3,4,5-trimethoxy-  
phenyl (I), and  $\beta$ -pyridyl (II). Compounds of

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CZECHOSLOVAKIA / Organic Chemistry. Natural Compounds  
and Their Synthetic Analogs.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77820.

Abstract: ing water bath and then for 8 hrs at 120°; the mixture is diluted with 200 ml water, made weakly alkaline with 50% KOH, and the product is salted out with solid K<sub>2</sub>CO<sub>3</sub> and extracted with CHCl<sub>3</sub>; HOCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>4</sub>CN is obtained, yield 51%, bp 159-161°/11mm. 60 gms of the latter substance are dissolved in 440 ml abs alc saturated at 0° with NH<sub>3</sub> gas and the solution is hydrogenated over Raney Ni at 150° and at an initial pressure of 130 atm, giving HOCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>5</sub>NH<sub>2</sub> (IV), yield 86%, bp 139-140°/11mm, n<sub>D</sub><sup>22</sup> 1.4735. 35 gms IV are added with cooling to 165.8 gms of 90% HCOH followed by the addition of 61 gms of 35% HCHO. The mixture is heated for 10 hrs [temp?], 55 ml

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CZECHOSLOVAKIA / Organic Chemistry. Natural Compounds G-3  
and Their Synthetic Analogs.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77820.

Abstract: of concn HCl are added, and the solution is evaporated to dryness under vacuum; the residue is dissolved in a small amount of water, the solution is made alkaline with 50% KOH, salted out with solid K<sub>2</sub>CO<sub>3</sub>, and extracted with CHCl<sub>3</sub>, giving HOCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)(CH<sub>2</sub>)<sub>5</sub>N(CH<sub>3</sub>)<sub>2</sub> (V), yield 74%, bp 131-132°/12mm, n<sub>D</sub><sup>23</sup> 1.4589, dipicrate mp 110-111° (from alc), diiodomethylate mp 245-257° (from alc). The esterification of V gives I, bp 210-212°/1mm, dihydrochloride mp 175-179° (decomp; from ether-alc), dipicrate mp 156-157° (from alc, diiodomethylate mp 245-247° (from alc); and II, bp 153-156°/1mm, trihydrochloride mp

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